

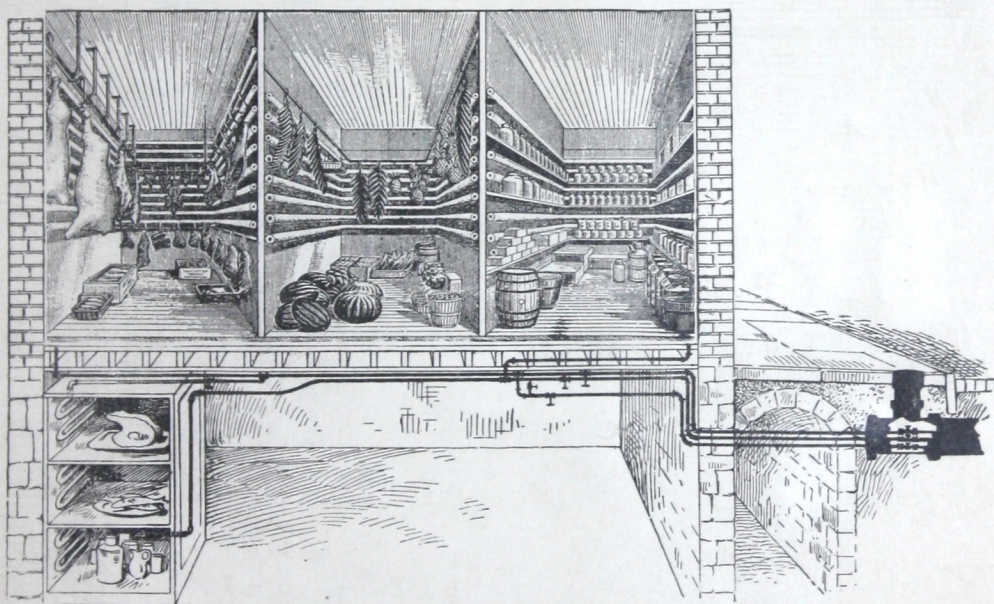
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..... THE

NEW ERA IN REFRIGERATION

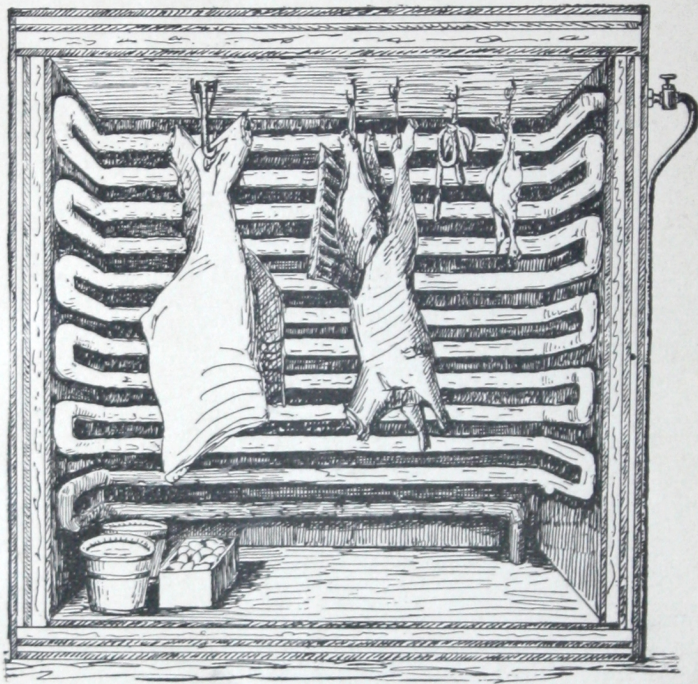
COOLING BY STREET PIPE LINE



INTERIOR VIEW, SHOWING CONNECTIONS FROM STREET PIPE LINE TO COOLING ROOMS

INTERNATIONAL COOLING COMPANY

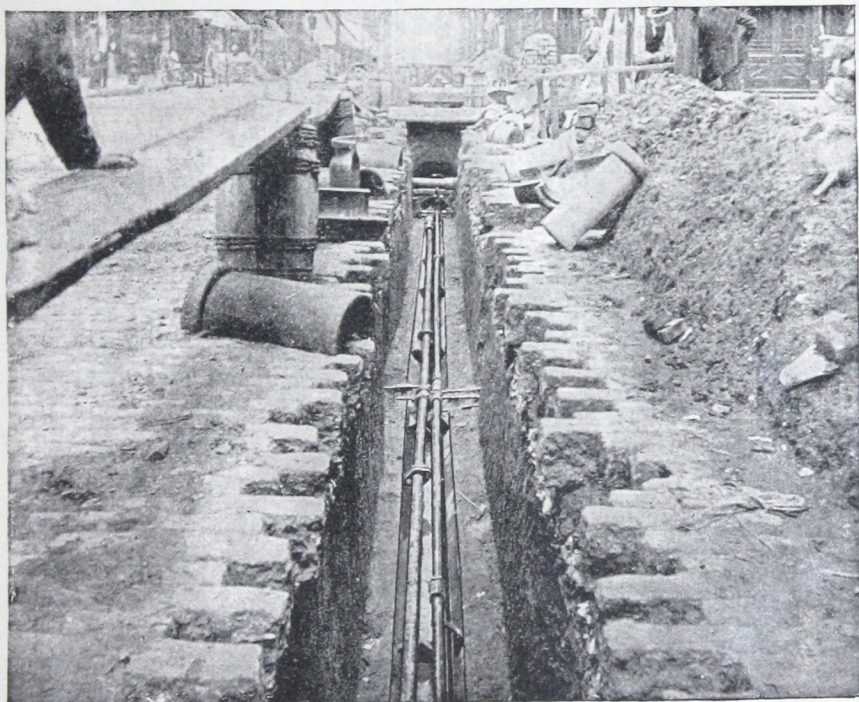
32 PINE STREET, NEW YORK



BUTCHER'S BOX.
INTERIOR VIEW, SHOWING FROSTED PIPES.

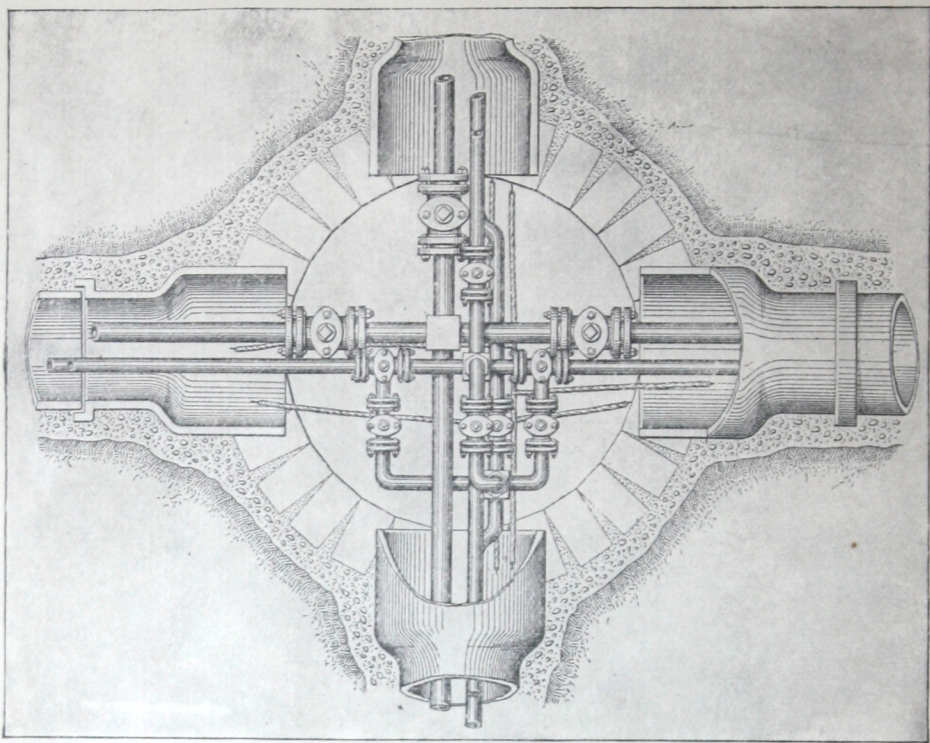
THE NEW ERA IN REFRIGERATION

COOLING BY STREET PIPE LINE



REFRIGERATING PIPE LINE IN PROCESS OF CONSTRUCTION,
SIXTH STREET, ST. LOUIS, MO., JUNE, 1891.

MECANICAL REFRIGERATION has in recent years enormously developed the business of storing and distributing the world's food supplies, and has become indispensable in many manufacturing industries. It is vastly superior in efficiency, reliability, cleanliness and economy to that obtained from melting ice. A system for supplying this refrigeration through pipes laid in the streets from Central Stations, exactly as gas, water and steam are supplied, has been established in Denver and St



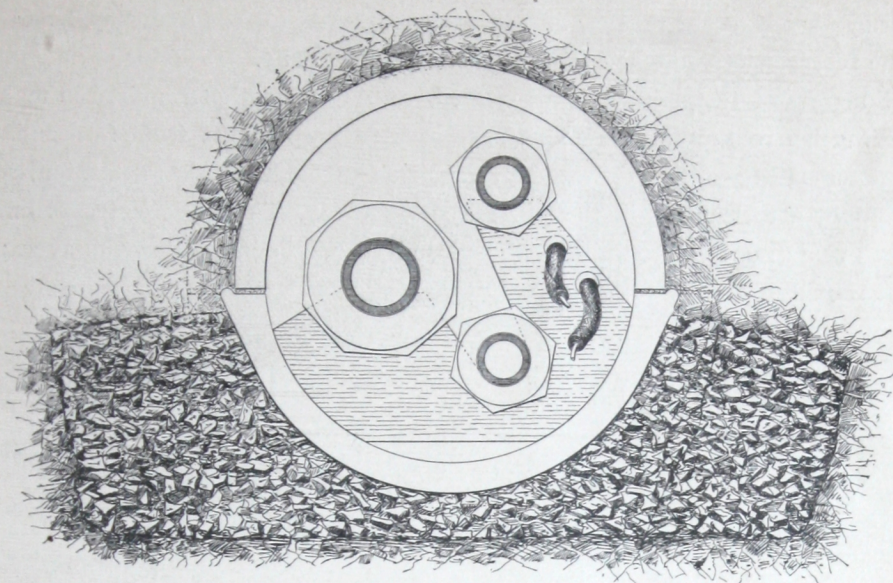
THE STREET LINE.—VIEW OF MAN-HOLE—LOOKING DOWN.

Louis for four years. The plants in both cities have given most acceptable service to numerous patrons, have been extended from time to time, and have amply demonstrated the entire mechanical and financial success of the system.

This service, wherever introduced, not only displaces the existing ice trade, but its superior convenience and efficiency lead to increased use of refrigeration, and its application to a variety of purposes for which ice cannot be used. In many places a cold storage warehouse and ice factory can be combined with the Central Station very profitably because of the economies possible in doing business on a large scale.

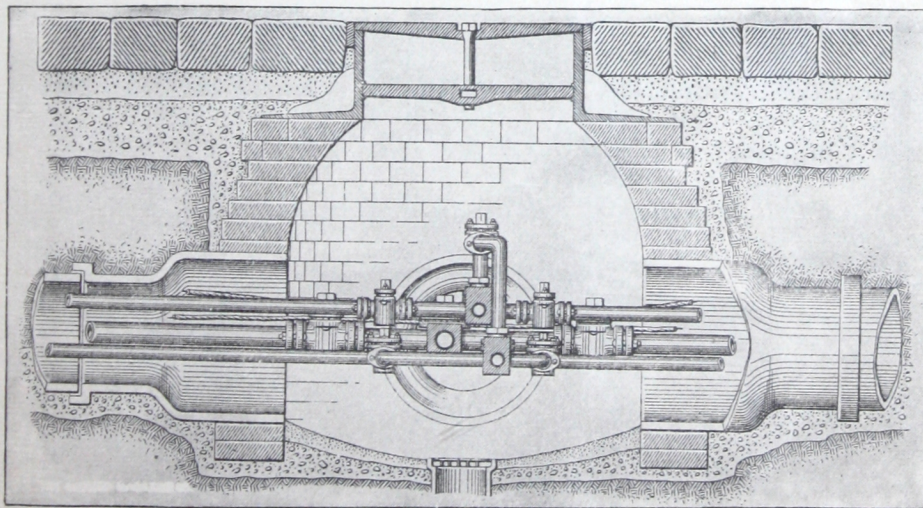
Neither cold air nor anything cold is sent through the pipes, such methods invariably proving financial failures, because of loss of cooling power by absorption of heat from the earth or air, despite the most costly insulation. In this system the pipes (except the expansion coil) have the temperature of their surroundings, *and the entire refrigerating power of the machine is delivered and utilized in the refrigerators of the customers, none being lost on the way.*

Liquid anhydrous ammonia, usually at a pressure of 150 pounds to the square inch, at summer temperature, flows from the machine through one pipe (the liquid line) to the point of use, and is there expanded by being allowed to flow through a small hole in a valve carefully adjusted to the amount of refrigeration required. This expansion takes place in a coil of pipe, known as the expansion coil, within the space to be cooled, and from this coil the ammonia, now changed to vapor, returns through a larger pipe (the vapor line) to the Central Station.



CROSS SECTION OF STREET PIPE LINE CONDUIT.

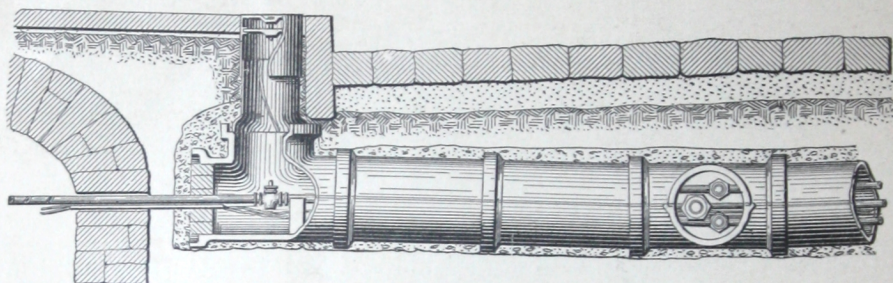
A third pipe, connected with the liquid and vapor pipes at each refrigerating box and also in man-holes at the street crossings, constitutes a vacuum or safety line and is a vital part of the system. By means of it any section in which new connections or repairs are to be made can be emptied without intermitting the operation of the system elsewhere. A reservoir (for liquid anhydrous ammonia) is placed at the outgoing end of the machine, a second reservoir (for strong aqua ammonia) at the incoming end of the machine, and a third (for weak aqua ammonia) is also employed. The machine operates steadily while the contents of the several reservoirs vary as the demand upon the street line is greater or less than average. The machine may be shut



THE STREET LINE.—VERTICAL SECTION OF MAN-HOLE.

off entirely for a time for repairs, and in cool weather a night force may be dispensed with, the reservoir system continuing to work automatically.

All degrees of temperature are supplied, varying from that required in making ice or freezing fish to the small amount necessary to keep moths from furs and woolen goods. Regulating valves, operated by electricity from the Central Station, are each controlled by a thermostat in the place to be cooled. This is adjusted ordinarily to open the valve at one degree above and close it at one degree below the average temperature required.



THE STREET LINE.—SECTION OF SERVICE BRANCH.

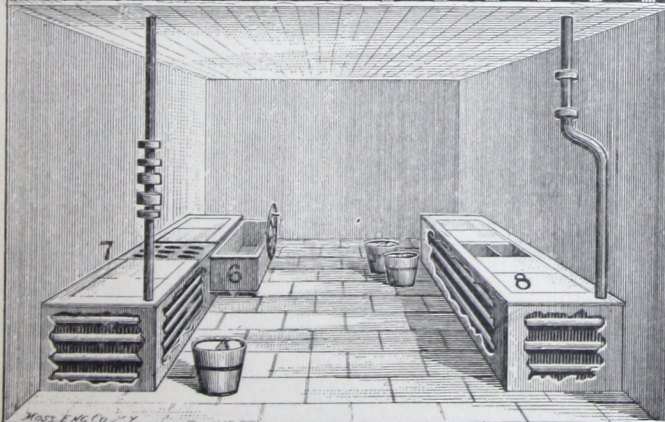
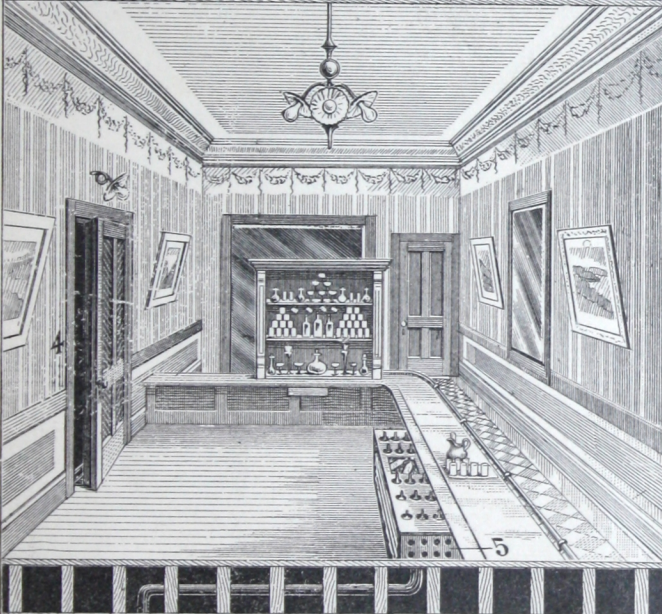
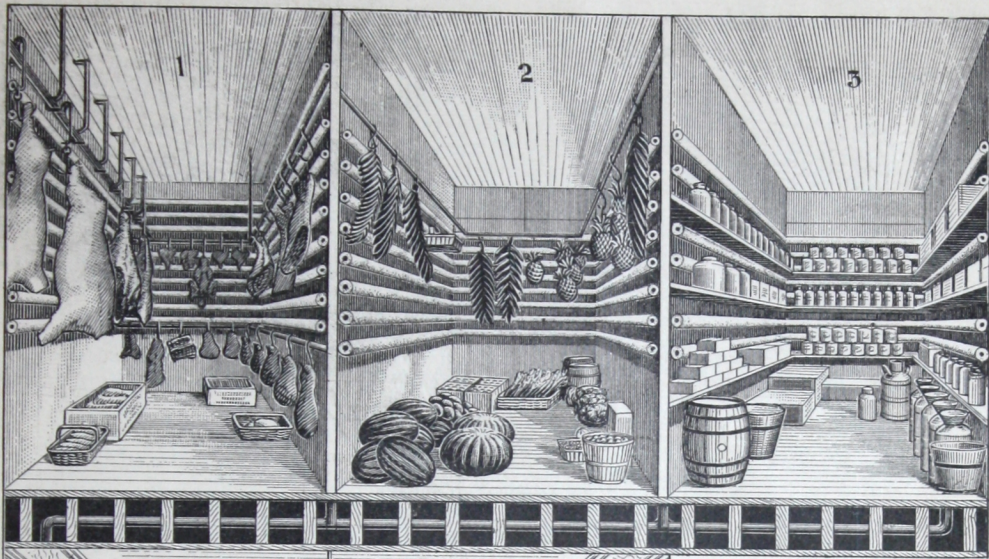
THE NEW REFRIGERATION

— MEANS —

*Reduced Cost, Increased Efficiency, Uniform Temperature, Lower
Temperatures, Economy of Space, No Ice Famines,
Greater Healthfulness, Cleanliness,
Convenience and
Comfort*

— IN —

*Hotels, Markets, Restaurants, Stores, Cafés, Offices, Hospitals,
Factories, and Homes.*



REFRIGERATION

—IN THE—

DENVER CLUB

—BY—

STREET PIPE LINE

FROM PLANT OF THE

Colo. Automatic Refrigerating Co.

DISTANT ABOUT ONE MILE.

SECOND FLOOR.

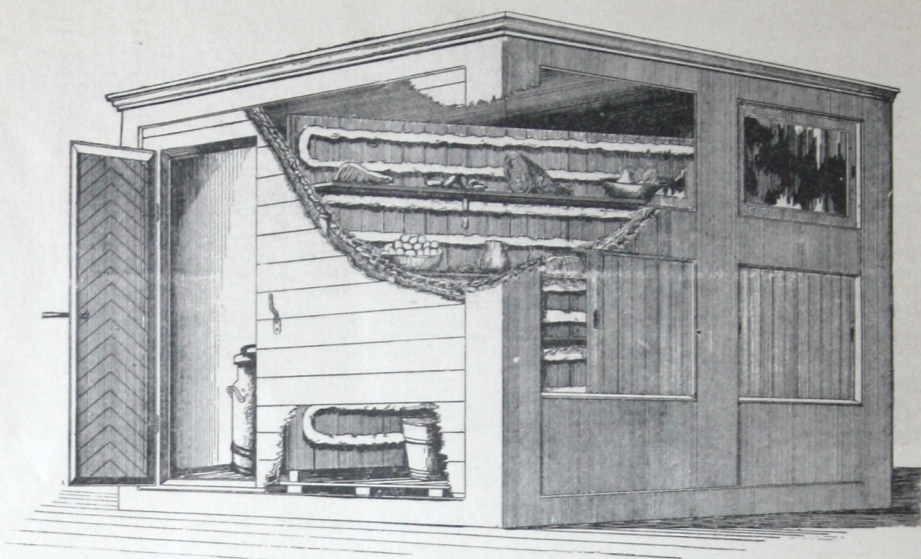
- 1.—General Provision and Meat Room. (Reduced in cut to half proportionate size.) Temperature 38°.
- 2.—Fruit Room. Temperature 45°.
- 3.—Kitchen Box. Temperature 40°.

FIRST FLOOR.

- 4.—Wine Room. Temperature 35°.
- 5.—Working table, with racks for bottles, &c, in center a champagne freezer. Temperature 12°.

BASEMENT.

- 6.—Ice cream freezer and
- 7.—Caraffe freezer Temperature 8°.
- 8.—Ice tank. (Reduced from proportionate size), daily capacity 500 lbs. Temperature 6°.



*From a Multitude of Testimonials on File, showing the Variety of
Service rendered and the Satisfaction Given,
a few are appended.*

OFFICE OF THE MAYOR.

MARION D. VAN HORN,
Mayor.

J. R. SAVILLE,
Secretary.

DENVER, COLORADO,

May 14, 1894.

HON. C. S. MOREY, *President,*
Colorado Automatic Refrigerating Co., Denver, Colo.

DEAR SIR:—I take pleasure in saying that I have personally visited and inquired into the workings and efficiency of your system of refrigeration in some of the leading Packing Companies and Hotels of this city, and am greatly pleased with all I have learned about it. I have no hesitation in saying that it has all the merits you claim for it, is giving entire satisfaction to the consumer both as to its cost and results. The saving of labor and certainty of service are other advantages in its favor, and it should be in operation in all other cities.

The construction of your plant in the streets and alleys of this city has never given cause for any complaint; there has been no friction or unpleasantness, and public interests have not been in any way injured.

I trust you will have the encouragement you deserve in your efforts to extend this system, which, wherever introduced, will carry its own commendation.

Very truly yours,

M. D. VAN HORN, *Mayor.*

DENVER, COLO., August 1, 1894.

MR. CHAS. T. CLARK,

Colorado Automatic Refrigerating Co., Denver, Colo.:

DEAR SIR:—We take pleasure in testifying to the efficiency and superior advantages of the system of "Refrigeration from Central Stations," as inaugurated by your Company in this city several years ago.

Since connecting our refrigerating rooms and boxes with their street mains, we have had all the advantages to be derived from a separate ice or refrigerating machine on our individual premises.

The service has been continuous, and any required temperature has been uniformly supplied, even in the hottest weather.

The charges have been satisfactory, and no more than the same refrigeration would have cost by the use of ice.

The dryness of the atmosphere, the freedom from slop and dirt incident to melting ice, and the saving of labor in storing ice, are great advantages we obtain by the use of this system, in addition to the freezing temperatures which cannot be obtained by use of ice alone.

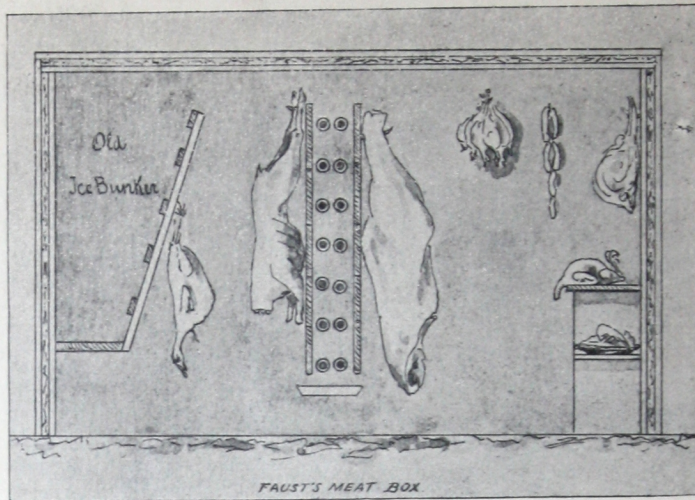
We most heartily commend the system to those in need of refrigeration anywhere.

Yours truly,

NAME.	BUSINESS.	DATE CONNECTED.
THE DENVER PACKING CO., By H. L. Luckenbach, Secretary.	Meats, etc., ...	January 18, 1890.
TORTONI RESTAURANT, Kavanaugh & Vidal.	Restaurant and Saloon,	December, 1889.
THE STANDARD MEAT & LIVE STOCK CO., Leonard Walters, Secretary.	Wholesale Meats,	April, 1890.
A. BOOTH PACKING CO., G. Woodhall, Manager.	Oysters and Fish,	October, 1891.
THE DENVER FISH CO., M. C. Flint, Manager.	Oysters and Fish,	December, 1891.
LITTLETON CREAMERY CO., I. S. Morse.	Butter and Cream,	May, 1893.
THE WESTERN MEAT & LIVE STOCK CO., Jas. Guard, President.	Wholesale Meats,	November, 1889.
CHAS. M. MILLER,	Undertaker,	June, 1892.
W. T. DUNCAN,	Saloon,	December, 1889.
H. C. SMITH,	Restaurant,	December, 1889.
EUGENE CROFF,	Boston Cafe,	August, 1890.
WINDSOR HOTEL, C. M. Hill, Manager.		December, 1889.
THE BURKHARDT PACKING CO.,	Wholesale Meats,	March, 1890.
AMERICAN HOTEL, Chas. E. Meyers, Manager.		April, 1892.
THE COLUMBIA, W. T. Bates, Manager.	Hotel,	July, 1892.
THE ALBERT, E. St. John, Proprietor.	Hotel,	January, 1893.
ALBANY HOTEL CO., "It's a good thing."—J. D. Fanning, Manager.	Hotel,	July 31st.
THE DENVER CLUB, Jas. S. Hudson, Secretary Executive Committee.	Club House,	1891.

And others.

The full list of customers who have signed the above certificate, and a similar certificate and list from St. Louis, will be sent to anyone requesting it.



A. E. FAUST,
Wholesale Dealer in
Fresh Oysters, Sea Fish, Game and Poultry.
FULTON MARKET.

St. Louis, March 8th, 1894.

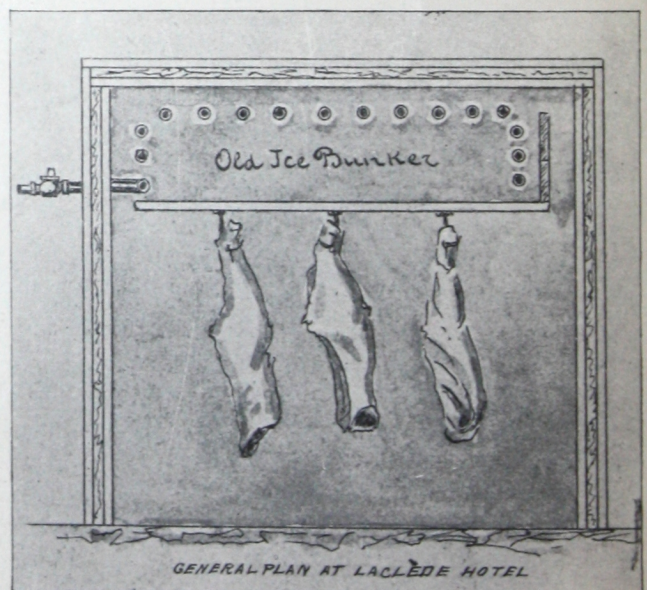
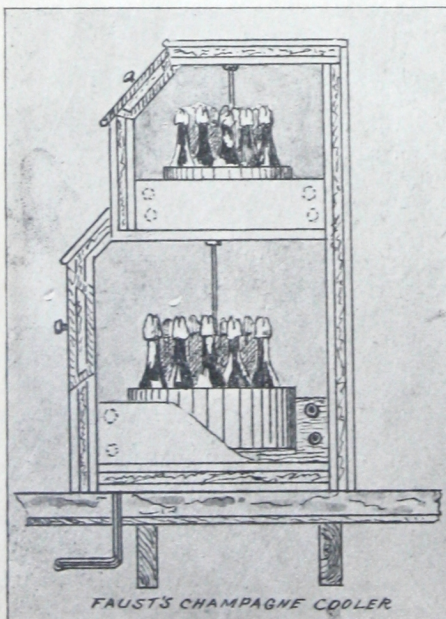
St. Louis Automatic Refrigerating Co.

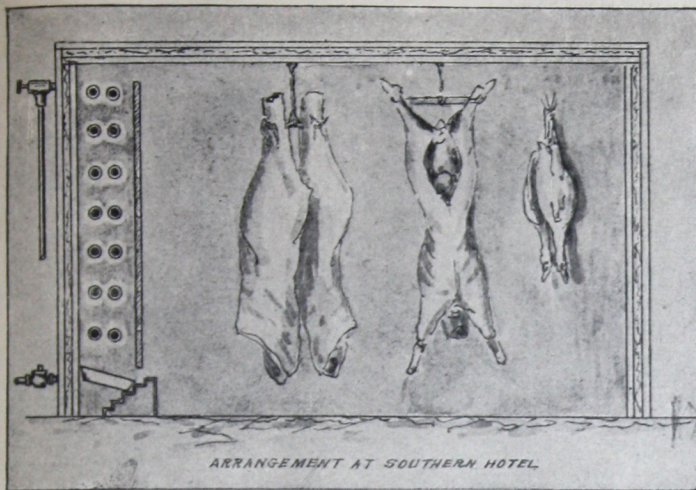
GENTLEMEN:—We adopted your Company's system of "Refrigeration through Street Mains from a Central Station," about three years ago. From its use we are relieved from the daily handling of large quantities of ice, a great saving of labor and space. In some of our boxes, particularly the champagne box, it would be almost impossible to secure the required results in any other way. The service is so continuous, so cleanly, so thoroughly reliable, that we are convinced that every one will avail themselves of its advantages as opportunity offers.

Respectfully,

A. E. FAUST & SONS,

Per GEO. J. HAGAMAN, *Manager.*





PRIVATE OFFICE,
THE SOUTHERN HOTEL,
ST. LOUIS, March, 8, 1894.
*St. Louis Automatic Refrigerating
Co., St. Louis, Mo.*

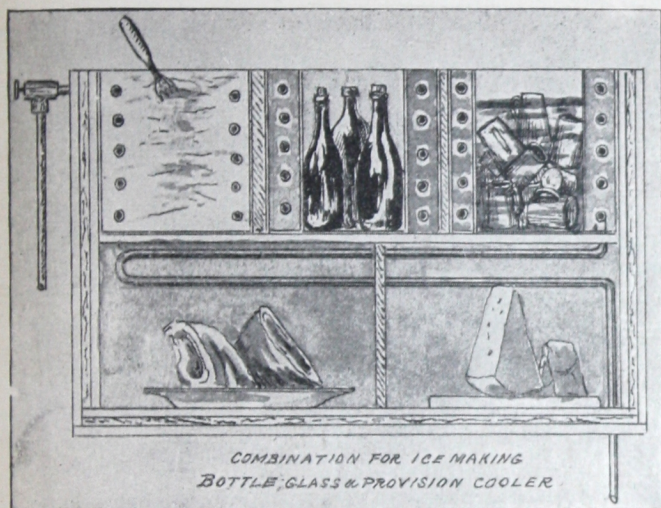
GENTLEMEN:—Since December 18, 1891, we have been using your system of refrigeration by street pipe line in our meat and general storage boxes.

We find it more satisfactory in every way than using ice and salt, as we did before introducing your system.

It is much cleaner and gives a more regular and lower temperature than ice and salt, and also keeps the air dryer in the refrigerators.

We think that any one who has ever used it would not do without it if they were in a locality where the service could be obtained.

Very truly yours,
HENRY C. LEWIS,
Manager.



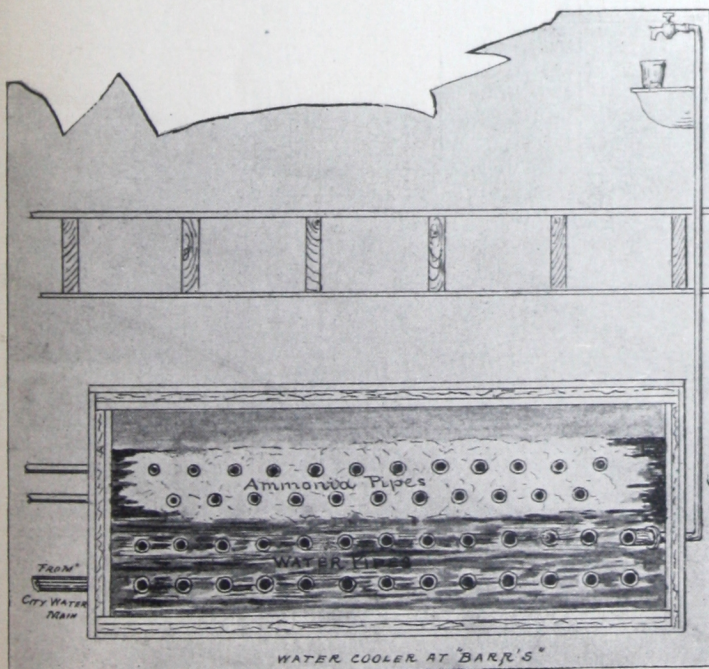
ST. JAMES' HOTEL,
ST. LOUIS, July 20, 1894.
GEN. D. BRANSON,
Gen. Mgr.,
32 Pine St., New York.

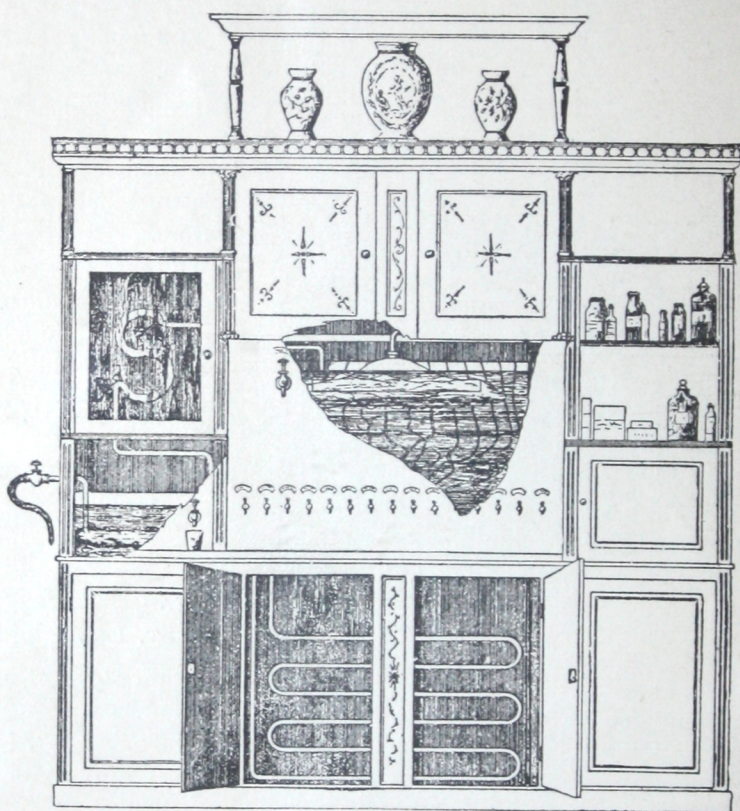
DEAR SIR:—Your favor of the 17th duly received. I take pleasure in stating that I have used the refrigerating system by street pipe line for three years and find it very satisfactory.

It takes much less room, keeps a lower temperature, no trouble or labor to handle, and costs less than ice.

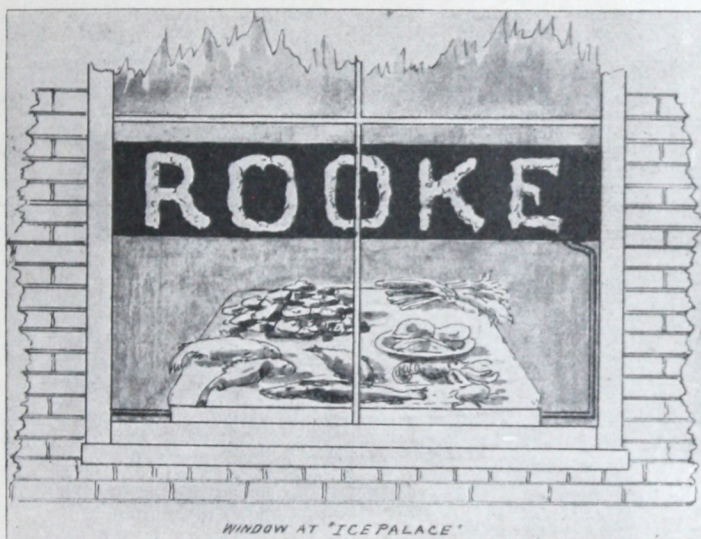
We are better pleased with this system every year we use it.

Yours truly,
THOS. P. MILLER.



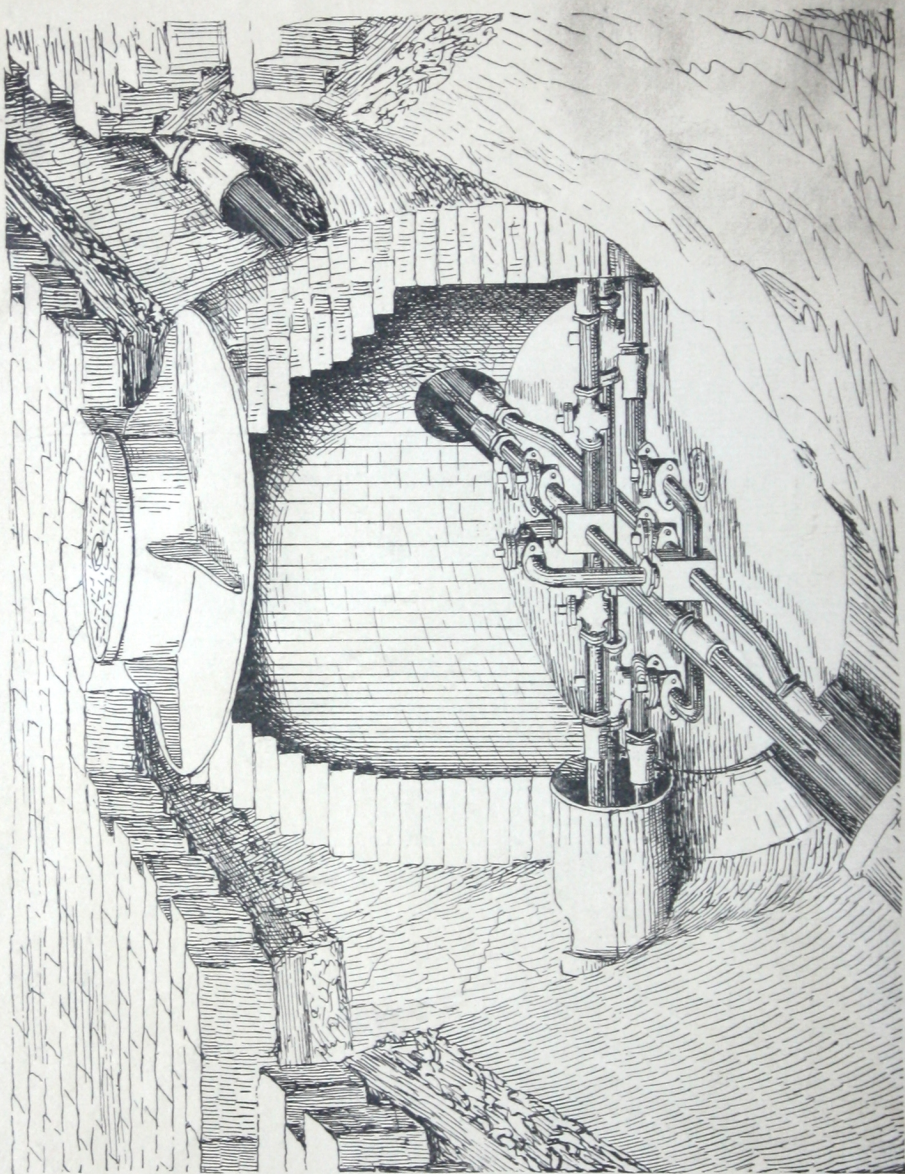


SODA FOUNTAIN AT SOUTHERN HOTEL, ST. LOUIS.



WINDOW AT "ICE PALACE"

RESTAURANT, ST. LOUIS.



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